

FIG. 1

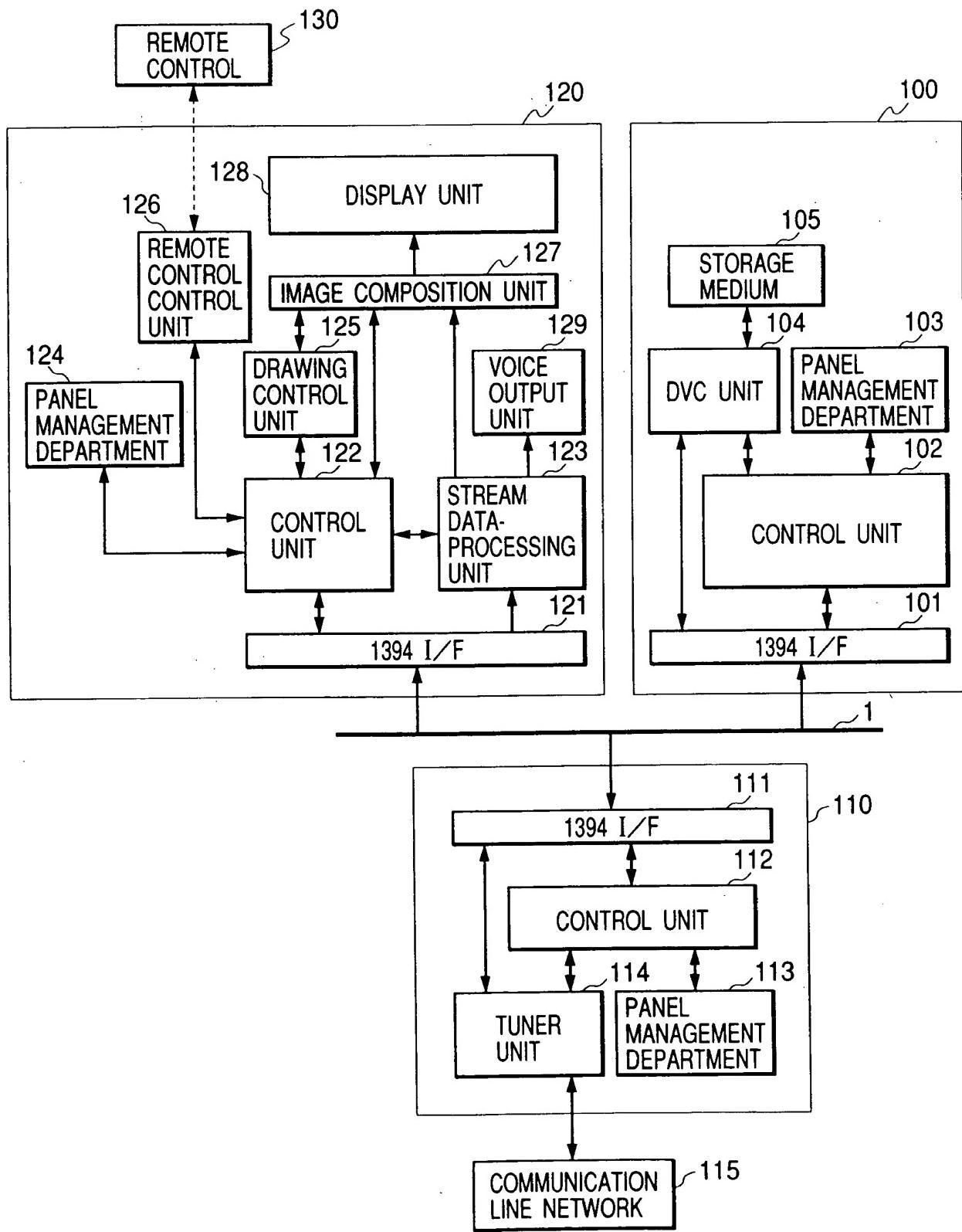


FIG. 2

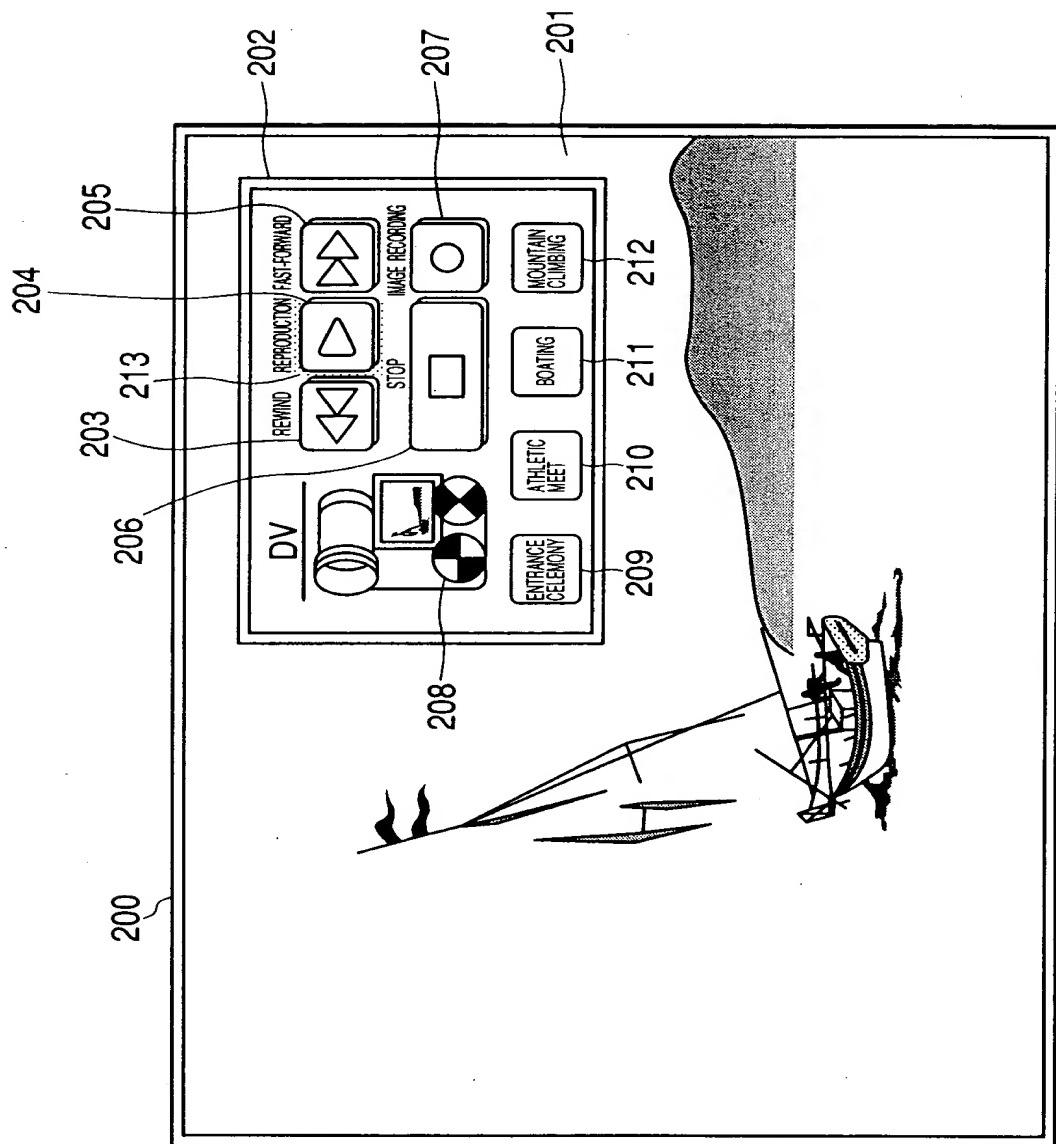


FIG. 3

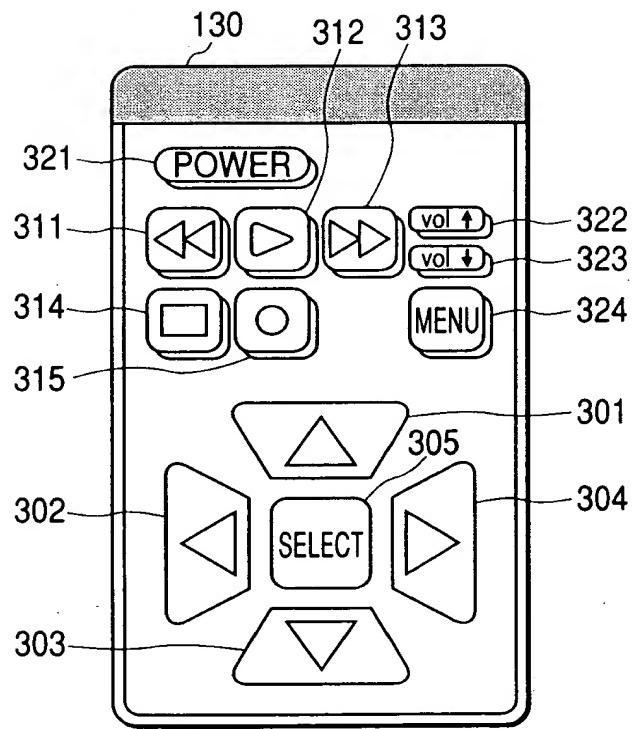


FIG. 4

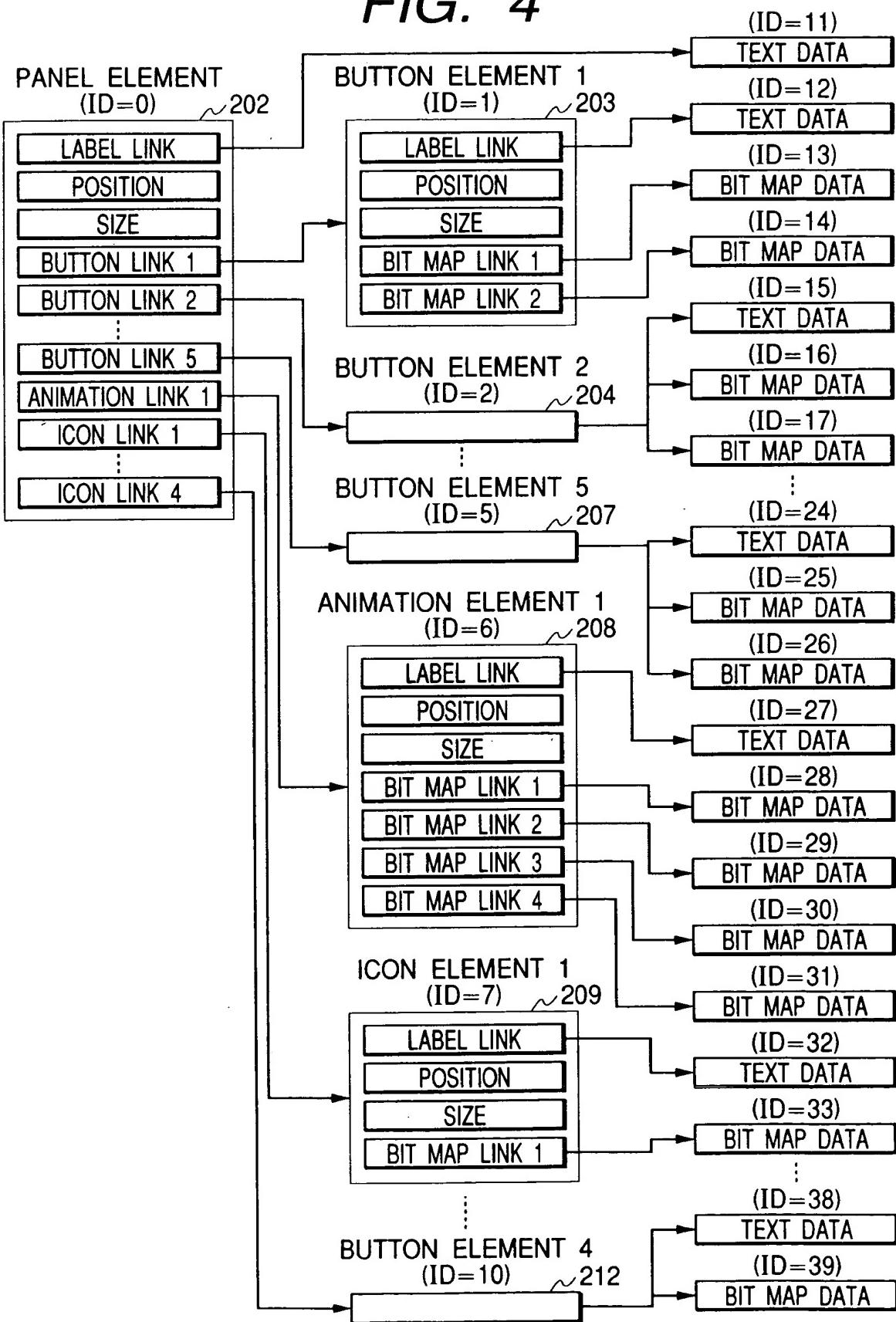


FIG. 5

| ADDRESS OFFSET | VALUE | CONTENTS | |
|-------------------|-------|----------------------|-------------------------------------|
| 00h | 80h | ELEMENT TYPE (PANEL) | |
| 01h | 00h | ELEMENT ID (ID=0) | |
| 02h | 00h | DATA LENGTH | |
| 03h | 00h | | |
| 04h | 00h | | |
| 05h | 00h | | |
| 06h | 00h | | |
| 07h | 52h | | |
| 08h | 80h | LABEL LINK | DATA TYPE (TEXT) |
| 09h | 0Ah | | ELEMENT ID (ID=11) |
| 0Ah | 00h | | THE NUMBER OF POSITION DESIGNATIONS |
| 0Bh | 05h | | X-COORDINATE 0 |
| 0Ch | 01h | POSITION | Y-COORDINATE 0 |
| 0Dh | 00h | | SYSTEM-OF-COORDINATES DESIGNATION 0 |
| 0Eh | 04h | | |
| 0Fh | 00h | | |
| 10h | 04h | SIZE | |
| 11h | 00h | | WIDTH |
| 12h | 01h | | |
| 13h | 68h | | HEIGHT |
| 14h | 00h | BUTTON LINK 1 | |
| 15h | 78h | | ELEMENT TYPE (BUTTON) |
| 16h | 80h | | ELEMENT ID (ID=1) |
| 17h | 04h | | |
| 18h | 00h | BUTTON LINK 2 | ELEMENT TYPE (BUTTON) |
| 19h | 01h | | ELEMENT ID (ID=2) |
| 1Ah | 80h | | |
| 2Bh | 04h | | |
| 2Ch | 00h | BUTTON LINK 5 | |
| 2Dh | 02h | | |
| : | : | : | |
| 26h | 80h | BUTTON LINK 5 | ELEMENT TYPE (BUTTON) |
| 27h | 04h | | ELEMENT ID (ID=5) |
| 28h | 00h | | |
| 29h | 05h | | |
| 2Ah | 80h | ANIMATION LINK 1 | ELEMENT TYPE (ANIMATION) |
| 2Bh | 0Ah | | ELEMENT ID (ID=6) |
| 2Ch | 00h | | |
| 2Dh | 06h | | |
| 2Eh | 80h | ICON LINK 1 | ELEMENT TYPE (ICON) |
| 2Fh | 0Ch | | ELEMENT ID (ID=7) |
| 30h | 00h | | |
| 31h | 07h | | |
| : | : | : | |
| 3Ah | 80h | ICON LINK 4 | ELEMENT TYPE (ICON) |
| 3Bh | 0Ch | | ELEMENT ID (ID=10) |
| 3Ch | 00h | | |
| 3Dh | 0Ah | | |

FIG. 6

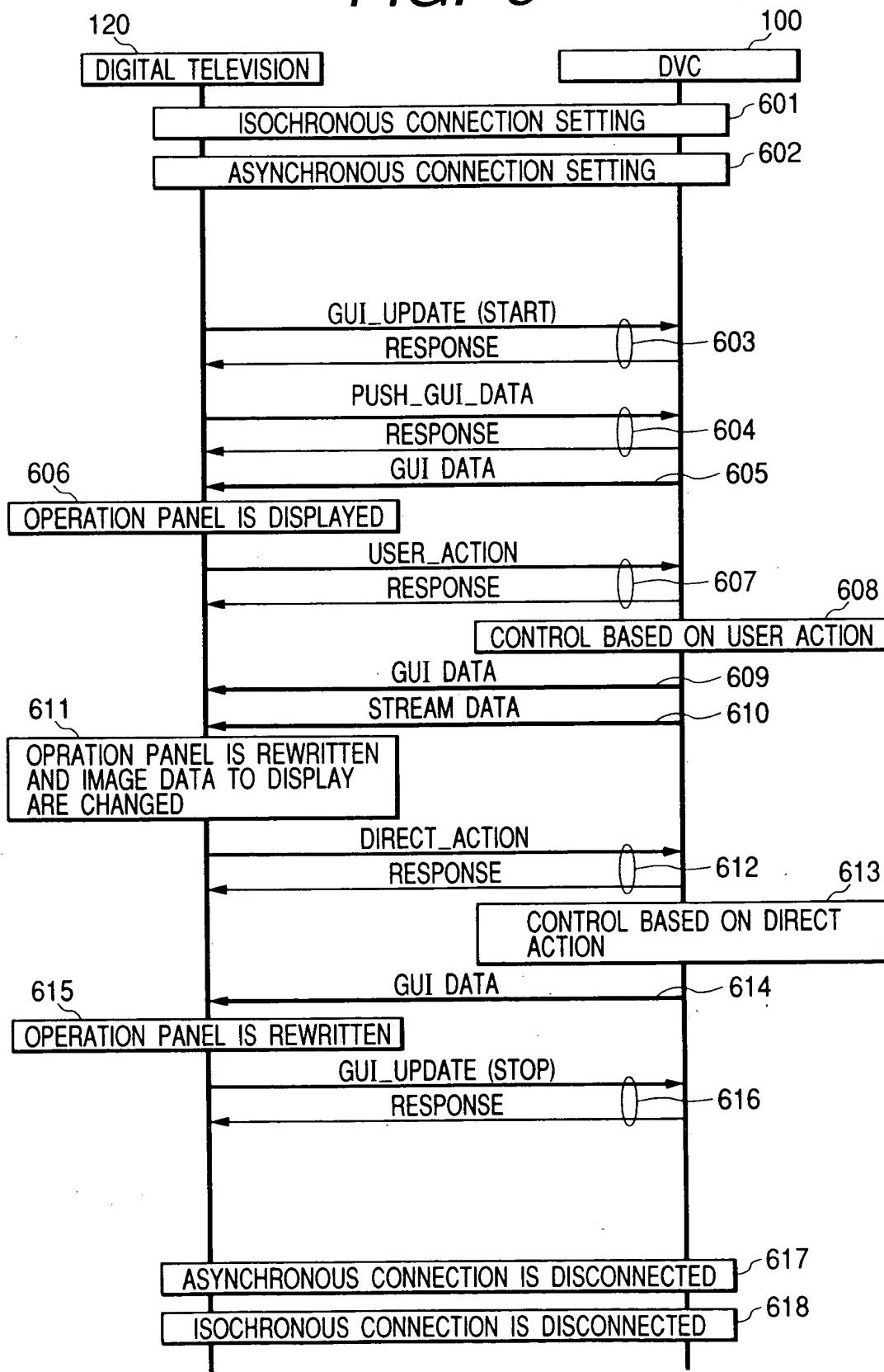


FIG. 7A

| UNIT SPEC | | | | OPCODE | OPERAND (0) |
|-------------|----------------------------|--------------|-------------|--------|-------------|
| CTS | CTYPE | SUBUNIT_TYPE | SUBUNIT_ID | | |
| OPERAND (1) | OPERAND (2) | OPERAND (3) | OPERAND (4) | | |
| ----- | | | | | |
| OPERAND (n) | "0" PADDING (IF NECESSARY) | | | | |

FIG. 7B

| CTS | RESPONSE | SUBUNIT_TYPE | SUBUNIT_ID | OPCODE | OPERAND (0) |
|-------------|----------------------------|--------------|-------------|--------|-------------|
| OPERAND (1) | OPERAND (2) | OPERAND (3) | OPERAND (4) | | |
| ----- | | | | | |
| OPERAND (n) | "0" PADDING (IF NECESSARY) | | | | |

FIG. 8A

| | |
|-------------|--------------|
| OPCODE | GUI UPDATE |
| OPERAND [0] | SOURCE_PLUG |
| OPERAND [1] | : |
| OPERAND [2] | : |
| OPERAND [3] | SUB FUNCTION |
| OPERAND [4] | : |

FIG. 8B

| SUB FUNCTION VALUE | SUB FUNCTION |
|--------------------|--------------|
| 00h | OPEN |
| 01h | CLOSE |
| 02h | RESTORE |
| 03h | START |
| 04h | STOP |
| 06h | CHANGE |
| OTHERS | (RESERVED) |

FIG. 9A

| | |
|-------------|---------------|
| OPCODE | PUSH GUI DATA |
| OPERAND [0] | SOURCE_PLUG |
| OPERAND [1] | - |
| OPERAND [2] | - |
| OPERAND [3] | - |
| OPERAND [4] | - |
| OPERAND [5] | INDICATOR |
| OPERAND [6] | ELEMENT_ID |
| OPERAND [7] | - |
| OPERAND [8] | - |
| OPERAND [9] | - |

FIG. 9B

| OPERAND [5] | msd | (RESERVED) | lsb |
|-------------|-----|------------|-----|
| | | | |

FIG. 9C

| LEVEL | RANGE |
|-------|-----------------------|
| 00 | ITSELF |
| 01 | ITSELF AND NEXT LEVEL |
| 10 | ALL LEVEL |
| 11 | (RESERVED) |

FIG. 10

| | |
|-------------|-------------|
| OPCODE | USER ACTION |
| OPERAND [0] | SOURCE_PLUG |
| OPERAND [1] | : |
| OPERAND [2] | : |
| OPERAND [3] | ELEMENT_ID |
| OPERAND [4] | |
| OPERAND [5] | |
| OPERAND [6] | |
| OPERAND [7] | ACTION_TYPE |
| OPERAND [8] | DATA |
| : | : |
| : | : |

FIG. 11

| | |
|-------------|-----------------------|
| OPCODE | DIRECT_ACTION |
| OPERAND [0] | ACTION_CODE |
| OPERAND [1] | ACTION_TYPE |
| OPERAND [2] | ACTION_DATA_LENGTH |
| OPERAND [3] | ACTION_SPECIFIED_DATA |
| OPERAND [4] | : |
| OPERAND [5] | |
| : | |

FIG. 12

| ACTION CODE | USER OPERATION |
|-------------|----------------|
| 00h | ENTER |
| 01h | UP |
| 02h | DOWN |
| 03h | LEFT |
| 04h | RIGHT |
| 05h | MENU |
| 06h | EPG |
| 07h | CANCEL |
| : | : |
| 20h | POWER |
| 21h | VOLUME UP |
| 22h | VOLUME DOWN |
| 23h | MUTE |
| 24h | PLAY |
| 25h | STOP |
| 26h | PAUSE |
| 27h | RECORD |
| 28h | REWIND |
| 29h | FAST FORWARD |
| 2Ah | EJECT |
| 2Bh | FORWARD |
| 2Ch | BACKWARD |
| : | : |
| : | : |
| FEh | VENDER UNIQUE |
| FFh | (RESERVED) |

FIG. 13

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graph TD
    START([START]) --> CCR[CONTROL COMMAND RECEPTION]
    CCR --> S101{USER ACTION COMMAND?}
    S101 -- NO --> S109{DIRECT ACTION COMMAND?}
    S109 -- YES --> S103{ACTION WHICH CAN BE PERFORMED?}
    S103 -- NO --> S108[ERROR RESPONSE]
    S103 -- YES --> S104[NORMAL RECEIVING RESPONSE]
    S104 --> S105[DEVICE CONTROL BY USER ACTION]
    S108 --> S105
    S105 --> S106{PANEL CHANGE?}
    S106 -- NO --> S116[OTHER COMMAND PROCESSING]
    S106 -- YES --> S107[GUI DATA OF A PORTION TO CHANGE ARE TRANSMITTED]
    S116 --> S110{ACTION WHICH CAN BE PERFORMED?}
    S110 -- NO --> S115[ERROR RESPONSE]
    S110 -- YES --> S111[NORMAL RECEIVING RESPONSE]
    S111 --> S112[DEVICE CONTROL BY DIRECT ACTION]
    S112 --> S113{PANEL CHANGE?}
    S113 -- NO --> S114[GUI DATA OF A PORTION TO CHANGE ARE TRANSMITTED]
    S113 -- YES --> S101
    
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FIG. 14